



Health Supervision of Infants and Preschool Children

THE Working Group on Service Programs of the Public Health Conference on Records and Statistics has evolved a series of suggestions pertaining to the collection, analysis, and interpretation of service statistics as tools in effective health supervision of infants and preschool children. It was necessary to limit attention to health supervision because of lack of time in which to consider such additional aspects of child health programs as pediatric clinics and care of premature infants.

The working group recognizes wide variations in program content and in stages of development and available facilities in health departments at all levels, and considers that changing concepts and new approaches are vital to the attainment of goals in public health work. Prescribing specific statistical patterns

This is the second in a series of statements developed by the Working Group on Service Programs, originally named the Working Group on Service Statistics, of the Public Health Conference on Records and Statistics. In arriving at the conclusions embodied herein, the working group had the benefit of consultation with Dr. Martha Clifford, director of the bureau of maternal and child hygiene, Connecticut State Department of Health. The first statement was an outline of basic principles governing service statistics in public health, which appeared in the June 1956 issue of Public Health Reports, p. 520.

which would be applicable to all health departments was considered neither desirable nor possible. Consequently, the proposals of the working group should be regarded as a framework within which each health department may develop a statistical program in accordance with its own desires.

Prerequisites to accumulation of meaningful statistics

The following conditions must exist if meaningful service statistics are to be developed:

1. The objectives and scope of the program must be clearly defined.

2. Statisticians and program personnel such as physicians, nurses, nutritionists, social workers, and health educators should have a part in determining the kinds of information needed and in developing plans for its collection. The statistician should function as a member of the professional team in initial planning of the program as well as in program operation and evaluation.

3. The purposes to be served by statistical data should be clearly specified. Reports should be prepared only to fulfill specific purposes.

4. Provision should be made in advance, during the initial planning stage, for periodic evaluation of statistical procedures.

5. Statistics developed for health supervision of infants and preschool children should be correlated with statistics developed for related programs of the health department. One

means toward this end is to have a records committee periodically pass on and review basic statistical forms of the several programs.

Kinds of information necessary for effective operation of service

Information desirable for operation of effective health supervision of infants and preschool children is of three main types:

1. Baseline data should be used for determining overall needs and for evaluating completeness of service. According to the definition developed by the working group, these baseline data are not included as service statistics. It should be emphasized that service statistics are most valuable when related to baseline data. The working group considered it appropriate to cite a few examples of baseline data useful for the planning and evaluation of infant and preschool health services: live births, by geographic area; infant and preschool deaths, by cause; illnesses reported, by cause; births occurring at home; economic status of population, by geographic area; racial characteristics of population, by geographic area; availability of private and voluntary medical and allied personnel, facilities, and services; and resources of the health department.

2. The second type of information is that which would assist physicians, nurses, and other health department persons primarily in giving service to individual infants and preschool children. The kinds of information listed below outline valuable statistics for operating an effective health program:

- Total number of individual children served by the health department (unduplicated count) distributed by geographic area, new cases and old cases, and characteristics of children served (age, sex, color).

- Volume of service (number of visits).

- Type of service, for example, physical examination, dental services, immunization, parent counseling, referrals to other medical services, and results of referrals.

- Site of service, for example, child health conference, home visits, and immunization center.

In order to obtain this information, the following types of data should be routinely available regarding each child served by the health

department: date of birth, sex, and race of child; geographic area in which child resides; date of admission to service; number of times served by the health department, in the home and in child health conferences; kinds of services received from the health department.

Individual health departments should develop applications of the statistics outlined above in combination with each other to meet the needs of their own programs. Examples are number of children immunized, by age; types of service given to new as compared with old cases; and volume of service by site of service. Such data may be compiled either routinely or through special studies.

3. Then, there are the kinds of information that would assist program administrators primarily in analyzing the operation of their programs. Types of data regarding operation of the program, which should be available either routinely or through special studies are these:

- Total attendance, by age group and status (new or old patient) of children, at each clinic or conference, and personnel time involved. For example, reports of clinic attendance might suggest changes in clinic policy, dates, hours, or location in order to adjust services to needs. Also, effectiveness of home nursing visits might be evaluated. Total clinic visits related to physician time can be used to evaluate clinic policies.

- Incomplete services indicated by number of children previously under care but not given service over a certain length of time; percentage of children with broken appointments; number of cases with undue waiting time between appointments; number of children who have not been vaccinated or immunized; and failures to respond to recommendations. This information may be used for evaluation of general performance and policy.

- Summary of program activity, for evaluating personnel needs of a program, and for justifying specific types of expenditures.

- Clinics in operation in relation to economic status of geographic areas.

Techniques for collection, tabulation, analysis, and interpretation of information

Source documents. Information for service statistics may be obtained from conference or

clinic attendance records, basic family unit records, individual case records, tickler cards, nurses' daily activity reports, and the like.

Methods of tabulation. Service statistics may be tabulated by:

1. Manual methods—These methods of abstracting information by manual sorting and counting up individual case summary cards, or tally sheets, are applicable in small health departments.

2. Marginal-punched, hand-sort cards—This method permits ready analysis where the volume of service is not large enough to justify mechanical tabulation.

3. Mechanical tabulation—This method is practical in health departments with a large volume of services.

Frequency of compilation. The frequency with which specific reports should be compiled must be determined locally depending on uses to be made of the data. Unduplicated counts of individuals served should be tabulated annually on a calendar-year basis and more often if needed.

Compilation of all service statistics on a calendar-year basis is recommended for comparison with baseline data. Where these statistics are required for fiscal purposes, compilation on a fiscal-year basis should supplement, but not substitute for, calendar-year data. The working group cautions against more frequent tabulations than are justified by use.

Special studies. Special studies are useful tools in program evaluation. They are recommended as a device to reduce the number and complexity of routine reports wherever possible. Routine reports should concentrate on minimum essentials for reflecting program, avoiding over-refinement of data.

Some types of service statistics which might be obtained through special studies are determination of levels of immunizations, evaluation of specific new services or program techniques (for instance, triple antigen, administration of vitamins), changes in behavior resulting from health department activity, determining reasons for lapses in attendance at child health conferences or for failures to complete immunizations, comparison of effectiveness of individual interviews and group conferences, and time and cost studies.

Methods of interpretation and presentation. The mere tabulation of data does not in itself provide for maximum utilization of service statistics. There should be a team approach in planning summary tables, narrative analyses, graphic presentation, trend data, and how and when the collected data are to be used.

Statistical measurements of service should be interpreted in relation to baseline data, needs for services, and program objectives. Only thus can an approach be made to evaluating accomplishments of programs.

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The statement has been reproduced in mimeographed form as attachment A to document 229 by the National Office of Vital Statistics, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C.

Under the title, "A Guide for the Collection, Analysis, and Interpretation of Service Statistics in Health Supervision of Infants and Pre-school Children," it has the endorsement of the following organizations: Association of State and Territorial Directors of Local Health Services; Council of State Directors of Public Health Nursing; and the Statistics Section, and Committee on Administrative Practice, American Public Health Association.

